

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

NANOCO TECHNOLOGIES LTD.,

v.

SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA,
INC.

Civil Action No. 2:20-cv-00038-JRG

JURY TRIAL DEMANDED

**SAMSUNG’S MOTION FOR RECONSIDERATION OF THE COURT’S
CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER (DKT. 84)**

I. INTRODUCTION

Pursuant to Fed. R. Civ. P. 54(b), Samsung respectfully moves for reconsideration of the Court’s Claim Construction Memorandum Opinion and Order (Dkt. 84) (“Opinion”), which construed the term “molecular cluster compound” (“MCC”) in the four nanoparticle patents.¹ During claim construction, Samsung argued the term is indefinite and Nanoco argued the applicants acted as their own lexicographers by defining the term in different ways in three of the four nanoparticle patents. *See* Dkt. 64 at 6-13; Dkt. 70 at 4-14; Dkt. 71 at 1-7. The Opinion found the inventors did act as their own lexicographers in defining MCC, but rejected Nanoco’s proposals for multiple meanings, in favor of a single construction: “clusters of three or more metal atoms and their associated ligands of sufficiently well-defined chemical structure such that all molecules of the cluster compound possess the same relative molecular formula.” Dkt. 84 at 18.

After the Opinion issued and Samsung filed its objections to the Court’s construction of the MCC term, Dkt. 91, this case was stayed pending *inter partes* review (“IPR”) of all asserted claims of all asserted patents. Dkt. 121. During those IPRs, in order to avoid the prior art, Nanoco made clear and unmistakable arguments that further limited the scope of the claimed MCC—*i.e.*, by restricting what it means for the claimed MCCs to have “the same relative molecular formula.” Specifically, narrowing this Court’s and its own prior proposed constructions, Nanoco argued during the IPRs that every MCC in a reaction solution must be identical, including in mass and size, which Nanoco further made clear meant that mixtures of different clusters and aggregates of more than one cluster are not MCCs. Because Nanoco should not be permitted to proceed on a broader scope of the claimed MCC in this case for purposes of alleged infringement than the one

¹ The four nanoparticle patents are U.S. Patent Nos. 7,803,423 (“423 patent”), 7,588,828 (“828 patent”), 8,524,365 (“365 patent”), 7,867,557 (“557 patent”).

it successfully argued for purposes of invalidity in the IPRs, Samsung respectfully seeks an order limiting the scope of the MCC term consistent with Nanoco's IPR construction. *See TVIIM, LLC v. McAfee, Inc.*, 851 F.3d 1356, 1362 (Fed. Cir. 2017) ("Claim terms must be construed the same way for the purpose of determining invalidity and infringement.").

II. STANDARD OF REVIEW

Under Rule 54(b), this Court may "revise[] at any time before the entry of a judgment adjudicating all the claims and all the parties' rights and liabilities" any "order or other decision" that does not end the action. Fed. R. Civ. P. 54(b). The Court "is free to reconsider . . . its decision for any reason it deems sufficient, even in the absence of new evidence or an intervening change in or clarification of the substantive law." *Austin v. Kroger Tex., L.P.*, 864 F.3d 326, 336 (5th Cir. 2017). The Court is permitted to "revisit[] and alter[] its interpretation of claim terms." *Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1316 (Fed. Cir. 2010). Indeed, the Federal Circuit has instructed that "[t]he district court should monitor the proceedings before the PTO to ascertain whether its construction of any of the claims has been impacted by further action at the PTO or any subsequent proceedings." *Proctor & Gamble Co. v. Kraft Foods Glob., Inc.*, 549 F.3d 842, 848 (Fed. Cir. 2008).

III. ARGUMENT

The scope of the asserted claims of the nanoparticle patents is constrained by clear and unmistakable statements Nanoco made to the USPTO during the IPR proceedings to avoid the prior art. Notwithstanding that the asserted claims are "comprising" claims, and the product claims are directed to only a single nanoparticle and MCC, Nanoco argued—in an attempt to preserve patent validity—that every MCC must be identical, including in mass and size, in the reaction solution. As part of those arguments, Nanoco made clear that mixtures of different clusters and

aggregates of more than one cluster are not MCCs because they are not identical. The PTO relied on these new limitations in rejecting Samsung’s patent invalidity challenge.

“The Federal Circuit is clear that a claim is to be interpreted by the prosecution history of a patent, which includes arguments made during any [post-issuance proceeding].” *Beneficial Innovations, Inc. v. Blockdot, Inc.*, No. 2:07-CV-263-TJW-CE, 2010 WL 2246291, at *3 (E.D. Tex. June 3, 2010) (citing *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1362-63 (Fed. Cir. 2007); *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1158 (Fed. Cir. 1997)). A patentee’s statements made to the USPTO during post-issuance proceedings “may commit the patentee to a particular meaning for a patent term, which meaning is then binding in litigation.” *Beneficial*, 2010 WL 2246291, at *2 (citing *CVI*, 112 F.3d at 1158); *see also CIAS*, 504 F.3d at 1362 (stating the district court was “require[d]” to construe a claim term as excluding certain scope based on plaintiff’s statements during USPTO post-issuance proceedings); *Ramot at Tel Aviv Univ. Ltd. v. Cisco Sys., Inc.*, No. 2:19-cv-00225-JRG, 2020 WL 2517581, at *14-16 (E.D. Tex. May 15, 2020) (binding plaintiff to statements it made to the USPTO during an IPR). That includes statements made by a patentee “to distinguish a claim from the prior art,” which “may serve to limit the scope of the claim[s].” *Beneficial*, 2010 WL 2246291, at *2 (citing *CIAS*, 504 F.3d at 1362-63); *see also Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1336 (Fed. Cir. 2011) (limiting claim scope based on statements plaintiff made during USPTO post-issuance proceedings); *Blitzsafe Tex., LLC v. Honda Motor Co.*, No. 2:15-cv-1274-JRG-RSP, 2016 WL 4762083, at *16 (E.D. Tex. Sept. 13, 2016) (construing a claim term narrowly in light of the plaintiff’s statements during an IPR). A patentee’s statements during IPRs put the public on notice of what the patentee understands the boundaries of its claims to be, and this “public notice function” thus “requires that a patentee be held to what he declares during the prosecution of his patent.” *Ramot*, 2020 WL

2517581, at *16. Such statements bind the patentee regardless of whether the Board relied on them. *See Am. Piledriving*, 637 F.3d at 1336.

Here, Nanoco’s clear and unmistakable IPR statements, which constitute new limitations regarding the scope of the claimed MCC, bind Nanoco in this case. In light of these statements, the term “molecular cluster compound” should be construed to mean “clusters of three or more metal atoms and their associated ligands of sufficiently well-defined chemical structure such that all molecules of the cluster compound are identical to one another in that each has the same molecular formula, mass, and size. Mixtures of different clusters and aggregates of two or more clusters are not molecular cluster compounds.”

A. MCCs Must Be Identical To One Another

To distinguish the prior art, Nanoco represented to the USPTO that a cluster cannot be a MCC unless every such cluster in a given population is *identical*—*i.e.*, each MCC has exactly the *same mass*, has exactly the *same molecular formula*, and is exactly the *same size*. *See, e.g.*, Ex. 1 at 1 (arguing the patents describe MCCs as “defined *identical* molecular entities, as compared to ensembles of small nanoparticles” (emphasis added)), 23 (same), 31 (same); Ex. 2 at 1-2, 26, 35 (same as to ’423 patent); Ex. 3 at 1, 35 (same as to ’828 patent); Ex. 4 at 2, 26, 32, 35 (same as to ’557 patent).

For example, Nanoco argued clusters that do not all share the *same molecular mass* and the *same molecular formula* are not identical and thus are not the claimed MCCs. *See* Ex. 1 at 32-37 (arguing “clusters that show a distribution of molecular masses, like [the prior art]’s gold clusters, are not MCCs”); *id.* at 29, 31 (same); *id.* at 28-30 (distinguishing prior art that discloses “only an approximate formula for an average-sized particle, not a well-defined formula” showing every cluster is the same); Ex. 5 at 14 (relying on testimony “that particles with a distribution of

masses cannot be considered MCCs” in attempt to avoid prior art); Ex. 2 at 29 & n.3, 32-41 (similar); Ex. 3 at 32-35, 37, 39 (similar); Ex. 4 at 32-35, 37-41 (similar).

As another example, Nanoco also argued that MCCs that are not all *the same size* are not identical and thus are not the claimed MCCs. *See* Ex. 1 at 2 (arguing prior art does not disclose a MCC because “clusters that exist in a range of sizes are not MCCs”); *id.* at 26 (“[A] POSITA would not have considered particles with a size dispersity like [the prior art]’s to satisfy the MCC claim limitation.”); *id.* at 25-26, 30 (similar); Ex. 6 at 92:13-14 (“[T]he molecular cluster compound is an identically sized particle.”); 88:22-24 (similar); *id.* at 85:18-22 (similar); *id.* at 92:13-14 (similar); Ex. 7 ¶¶ 81, 120 (arguing a “distribution of different sized gold particles . . . cannot meet the definition of a molecular cluster compound.”); Ex. 8 at 18 (similar); Ex. 5 at 3 (arguing prior art discloses “gold clusters of different sizes as opposed to identical MCCs”); Ex. 2 at 3, 29-31 (similar); Ex. 3 at 2, 30-31 (similar); Ex. 4 at 3, 30-31 (similar).

The Board expressly recognized and adopted Nanoco’s arguments that the claimed MCCs must be identical to one another in the Board’s final written decisions. The Board stated that Nanoco distinguished clusters disclosed in the primary prior art reference on the basis that “‘they wouldn’t have the same relative molecular formula,’ and would not be identical.” Ex. 9 at 21 (citations omitted). It recognized Nanoco contended the primary prior art reference “produces clusters having a range of sizes” and a “suggested molecular formula” that “is an estimate based on an average of that range of sizes,” unlike the claimed MCC. *Id.*; *see also id.* at 17 (recognizing “Patent Owner states that [the primary prior art reference] does not describe its gold clusters as ‘identical to one another’” (emphasis omitted)); *id.* at 23 (noting “Patent Owner directs us to evidence that [the prior art paper]’s process does not make MCCs because the particles ‘span a distribution of masses’” (emphasis omitted)). The Board relied on these statements from Nanoco

to distinguish the prior art from the claimed invention. *See, e.g., id.* at 26-27 (concluding Samsung did “not identify any disclosure in [the primary prior art reference] that describes the clusters as identical,” and finding instead that reference describes “clusters that range in size,” are thus “not identical in size,” and have merely a “suggested formula” rather than “the same relative molecular formula” for “all molecules of the cluster compound”).

B. Mixtures of Different Clusters Are Not MCCs

As further support for its argument that every MCC must be identical, Nanoco clearly and unmistakably stated that mixtures of different clusters “fail to meet the definition of a MCC.” Ex. 1 at 1; *see also id.* at 33 (relying on expert testimony that “a mixture of clusters” does not satisfy the definition of a MCC in order to evade the prior art); *id.* at 34-35 (similar); *id.* at 36 (arguing that “cluster mixtures” supposedly disclosed in the prior art cannot satisfy the claimed invention); Ex. 5 at 10 (similar); Ex. 2 at 3, 37-39 (similar); Ex. 3 at 2, 38-41 (similar); Ex. 4 at 2, 37-41 (similar).

The Board expressly recognized and adopted Nanoco’s argument that mixtures of different clusters cannot constitute MCCs in its final written decisions. For example, citing to Nanoco’s Patent Owner’s Response, the Board stated Nanoco argued “that *a mixture of clusters is not an MCC* ‘because they wouldn’t have the same relative molecular formula,’ and would not be identical.” Ex. 9 at 21 (emphasis added); *see also* Ex. 10 at 18; Ex. 11 at 19; Ex. 12 at 20. In fact, the Board relied on Nanoco’s argument to distinguish the prior art from the claimed invention, concluding the prior art discloses “a disperse mixture of gold clusters that are not identical in size . . . as required for MCCs.” Ex. 9 at 27; *see also* Ex. 10 at 22-23 (similar); Ex. 11 at 23-24 (similar); Ex. 12 at 25-26 (similar). In light of Nanoco’s IPR arguments, the claimed MCC is thus limited to mixtures of only identical, not different, clusters.

C. Aggregates of Two or More Clusters Are Expressly Distinguished From MCCs

As additional support for its argument that every MCC must be identical, Nanoco argued during the IPRs that aggregates—*i.e.*, agglomerations of two or more clusters—are not MCCs. In fact, Nanoco clearly and unmistakably represented that “[a]ggregates are expressly distinguished by the [nanoparticle] patent[s]” and “do not meet the district court’s construction of MCC.” Ex. 5 at 14 (emphasis added); Ex. 1 at 42 (“Ensembles of nanoparticle[s], such as [the prior art]’s aggregated gold clusters do not meet the definition of a MCC.”); Ex. 8 at 16 (“Aggregates that span a distribution of masses are not MCCs.”); *see also* Ex. 13 at 14 (similar); Ex. 14 at 14 (similar); Ex. 15 at 14-15 (similar); Ex. 1 at 31 (similar); Ex. 5 at 3-4 (similar); Ex. 6 at 89:11-14 (similar); Ex. 2 at 35, 44 (similar); Ex. 3 at 35-36, 43-44 (similar); Ex. 4 at 35-36, 43-44 (similar).

The Board credited Nanoco’s arguments. Specifically, citing over ten pages in Nanoco’s Patent Owner’s Response, the Board stated “Patent Owner provide[d] detailed reasons why the clusters that [the primary prior art reference] prepares according to [a prior art] process do not qualify as MCCs within the scope of claim 1.” Ex. 9 at 18 (citing Ex. 1 at 27-37); *see also* Ex. 12 at 17 (citing Ex. 4 at 32-44). In those pages as well as others of its brief, Nanoco represented to the USPTO that the primary prior art reference teaches aggregating of gold clusters are inconsistent with the claimed MCC. Ex. 1 at 31, 40, 42; *see also* Ex. 4 at 34-35, 42, 44. Based on Nanoco’s IPR arguments, the claimed MCC thus does not encompass aggregates of two or more clusters.

* * *

Nanoco’s clear and unmistakable statements during the IPRs that the claimed MCC requires every cluster to be the same as every other cluster in a solution—which it supported with arguments that the claimed MCCs must be identical, cannot contain a mixture of different clusters, and cannot aggregate—are binding on Nanoco in this case. *See, e.g., Am. Piledriving*, 637 F.3d at 1336 (refusing to allow a patentee to “distance itself” from statements made during post-issuance

proceedings in order to distinguish a prior art reference); *Ramot*, 2020 WL 2517581, at *15-16 (similar); *Cellular Commc'ns Equip. LLC v. HTC Corp.*, No. 6:13-cv-507, 2015 WL 3464733, at *6 (E.D. Tex. June 1, 2015) (similar); *Beneficial*, 2010 WL 2246291, at *3 (similar); *see also F5 Networks, Inc. v. Radware, Inc.*, No. 17-cv-03166-CV, 2018 WL 6039873, at *1 (N.D. Cal. Nov. 19, 2018) (“[S]tatements made by the patent owner during inter partes review put the public on notice of how the patent owner views its patent” and “inform the proper construction of the term [at issue].”). Indeed, defining the claimed MCC consistent with Nanoco’s IPR statements ensures the asserted claims are “construed the same way for both invalidity and infringement” and prevents Nanoco from twisting the claims “like a nose of wax, in one way to avoid invalidity and another to find infringement.” *Data Engine Techs. LLC v. Google LLC*, 10 F.4th 1375, 1381 (Fed. Cir. 2021) (alterations, citations, and internal quotation marks omitted); *see also TVIIM*, 851 F.3d at 1362; *Ramot*, 2020 WL 2517581, at *16 (explaining “[t]he public notice function of a patent and its prosecution history **requires** that a patentee be held to what he declares during the prosecution of his patent” and concluding “[t]he Court here **must** hold Plaintiff to [its IPR] representation” (emphasis added)). The term “molecular cluster compound” should therefore be construed to mean “clusters of three or more metal atoms and their associated ligands of sufficiently well-defined chemical structure such that all molecules of the cluster compound are identical to one another in that each has the same molecular formula, mass, and size. Mixtures of different clusters and aggregates of two or more clusters are not molecular cluster compounds.”²

² Samsung maintains that the MCC term is indefinite as argued in its claim construction brief and objections. *See* Dkt. 70 at 8-14; Dkt. 91 at 1-5. Indeed, Nanoco’s arguments during the IPRs regarding what, in its view, does not fall within the scope of the claimed MCC are further evidence that a POSITA would not have been able to ascertain “with reasonable certainty the scope of the invention.” *Infinity Comput. Prods., Inc. v. Oki Data Ams., Inc.*, 987 F.3d 1053, 1059 (Fed. Cir.) (quoting *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015)), *cert.*

IV. CONCLUSION

For the foregoing reasons, Samsung respectfully requests that the Court construe the term “molecular cluster compound” consistent with Nanoco’s IPR statements to the USPTO.

denied, 142 S. Ct. 585 (2021). At a minimum, any construction of the claimed MCC must reflect Nanoco’s IPR statements.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on this 21st day of June, 2022.

/s/ Melissa R. Smith

Melissa R. Smith